

What is Claimed is:

1. A high-temperature shatter-proof thermal mug comprising:

a handle with predetermined size and sharp integrally connected said plastic container;

5 a rotating filling container with at least an opening on top portion;

a plurality of rotating covers with predetermined sharps and an opening on it is outwardly extended of said rotating filling container;

a heating component with heating wire connecting temperature monitor, and temperature detector, said heating wire surrounds said heating component, said

10 temperature detector is next to heating wire, and said temperature monitor is on said center part bottom portion of said heating component, and

an external electric socket which is permanently united with an automatic temperature control device and a plurality of indicating lights are attached on the top of said filling container thereof.

15 2. A thermal mug, as recited in Claim 1, said thermal mug contact metal at center part of bottom portion of said rotating filling container. Said heating device and said automatic temperature control device at said center part of bottom portion of said container make contact with said contact metal at said center part of bottom portion of said rotating filling container to convey heat, and increase said temperature of said
20 beverage contained inside said rotating filling container. When it reaches a temperature specified by consumer, a thermal device will stop generating heat; but

when said temperature of said beverage inside said filling container decreases, said thermal device will automatically activate heating device to give out heat again, until said beverage temperature reaches a predetermined level.

3. A thermal mug, as recited in Claim 1, there is an outlet connected to said rotating cover. Consumer may turn said rotating cover to release beverage from said outlet, or to seal said outlet. Said rotating cover is on top portion of said container.

4. A thermal mug, as recited in Claim 1, said automatic temperature control device is integrally connected to surface of said container. There is a liquid crystal display (LCD) board on it to adjust and indicate temperature.

6. A thermal mug, as recited in Claim 1, said external electric socket is integrally connected to said container.

7. A thermal mug, as recited in Claim 1, said control panel is characterized by fact that it can indicate temperatures within four different ranges. Control panel provide means of temperature adjustment, and then said displayer will indicate said specified temperature, and said indicating light within which said temperature will lighted up.

8. A thermal mug, as recited in Claim 1, said filling container and cover can provide rotating motions so as to provide connecting and/or sealing result to said container.

9. A thermal mug, as recited in Claim 1, said filling container is characterized by said heat-transfer component at said bottom of said container which conveys heat

through said heating component of said container to increase said temperature of said beverage in said filling container.

10. A thermal mug, as recited in Claim 1, said cover is characterized by said cover has an outlet and an opening. Said opening can seal outlet of said cover when it
5 rotates.

11. A thermal mug, as recited in Claim 1, said container, which is integrally connected with a handle with predetermined size and shape at said side. There is a lower cap made of flexible material at said bottom of said container that provides a horizontal support for said container. At said bottom of said container, a metal
10 temperature monitor is integrally connected to a heating wire, both of which are bound to outer surface of a heating component by a high-temperature wire. In said center of a fixed mount, there is a round hole to locate said temperature detector. A spring underneath temperature detector ensures said fixed mount moves in said center hole of said fixed mount.

12. As recited in Claim 1, there is an external electric socket located on side of said container from where said heating wire passes bottom portion of said fixed mount and connects to a circuit board. It is through said bottom portion of said fixed mount that said connecting line of heating wire; said temperature detector and said temperature
15 monitor are connected to said circuit board. Said aforesaid circuit board is fixed
20 inside a control panel.

13. As recited in Claim 1, said container contains a circuit board, which is a mini

computer, where a series of logic programs are inserted inside on said control panel form an integral circuit. Said control panel connects to a displayer. On said panel, there are also a switch and four temperature indicating lights.

14. As recited in Claim 1, said thermal mug consists of a cylinder filling container.

5 There is a sealing washer on top portion of said filling container. There is a metal heat-transfer component at bottom portion of said filling container. Said filling container can provide rotating motions and put in center portion of said container. Said heat-transfer component at bottom portion of said container is accessible to said heating component and said temperature detector. There is an inlet on top portion of
10 said filling container. Said inlet is sealed to prevent t spilling or outflow of beverages inside said filling container. There is also an outlet on top surface and said sealing washer at said bottom surface of said cover. Said top of said cover can provide rotating motions so as to overlap a rotating inlet, which can seal said outlet on said cover.

15 14. As recited in Claim 12, said container contains a circuit board, which is a mini computer, where a series of logic programs are inserted inside on said control panel form an integral circuit. Said control panel connects to a displayer. On said panel, there are also a switch and four temperature indicating lights.

15. As recited in Claim 13, said container contains a circuit board, which is a mini
20 computer, where a series of logic programs are inserted inside on said control panel form an integral circuit. Said control panel connects to a displayer. On said panel,

there are also a switch and four temperature indicating lights.

5

10